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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,480	04/21/2004	John Lair	64337.000002	7194

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EXAMINER
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CAI, WAYNE HUU

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/828,480

**Applicant(s)**

LAIR, JOHN

**Examiner**

Wayne Cai

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/19/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7, 14-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Alden (US 2004/0198436 A1).

**Regarding claim 1**, Alden discloses a wireless headset comprising:

- a switch for indicating a provision of audio information for transmission (paragraph 0034, and figure 5, item 58);
- means for wirelessly transmitting a signal representative of an engagement of the switch (paragraph 0039, and figure 8).

**Regarding claim 2**, Alden discloses the wireless headset of claim 1 as described above. Alden further discloses:

- a microphone assembly to receive audio information from a user (paragraph 0028, and figure 1, item 29);
- a speaker assembly to output audio information to the user (paragraph 0028, and figure 1, items 30, and 32).

**Regarding claim 3**, Alden discloses the wireless headset of claim 2 as described above. Alden further discloses, wherein the switch is positioned on the microphone assembly (paragraph 0034, and figure 5, item 58).

**Regarding claim 4**, Alden discloses the wireless headset of claim 2 as described above. Alden further discloses, comprising means for wirelessly transmitting at least a portion of the audio information from the user (paragraph 0039, and figure 8, items 13, 15, and 17).

**Regarding claim 7**, Alden discloses the wireless headset of claim 1 as described above. Alden further discloses, wherein the wireless headset is an earbud-type headset (figure 1).

**Regarding claim 14**, Alden discloses the wireless headset of claim 1 as described above. Alden further discloses, wherein the switch (figure 1, item 28) is connected to a main body of the headset via a wire lead (paragraphs 0027-0028, and figure 1, items 20, 22, 26, 34, and 36).

**Regarding claim 15**, Alden discloses the wireless headset of claim 1 as described above. Alden further discloses, wherein the signal representative of an engagement of the switch includes a signal transmitted during at least a portion of a period that the switch is engaged (paragraph 0035).

**Regarding claim 16**, Alden discloses the wireless headset of claim 1 as described above. Alden is silent on the signal representative of an engagement of the switch includes an absence of a signal during at least a portion of a period that the

switch is engaged. However, it is inherent that there is an absence of a signal during at least a portion of a period that the switch is engaged.

**Regarding claim 17**, Alden discloses the wireless headset of claim 1 as described above. Alden further discloses, wherein the means for wirelessly transmitting the signal representative of an engagement of the switch comprise a transceiver (figure 8, item 78).

Alden is silent on an engagement of the switch comprise an antenna. It is, however, inherent in the art to include the antenna for transmitting information between devices.

**Regarding claim 18**, Alden discloses an apparatus comprising:

- an interface operably connected to a half-duplex communications device (figure 8, item 28a);
- a wireless interface (figure 8, item 28b);
- means for receiving a first transmit mode signal via the wireless interface, the transmit mode signal indicating a provision of audio information for transmission by the half-duplex communications device (paragraph 0034, and figure 5, items 58 and 62);
- means for providing a second transmit mode signal to the half-duplex communications device via the interface to direct the half-duplex communications device to switch to a transmit mode (figure 8, items 28, 13, and 16).

**Regarding claim 19**, Alden discloses the apparatus of claim 18 as described above. Alden further discloses:

- means for receiving audio information via the wireless interface (paragraph 0039, and figure 8, items 28b and 78);
- means for providing the audio information to the half-duplex communications device via the interface (paragraph 0039, and figure 8, item 28a).

**Regarding claim 20**, Alden discloses the apparatus of claim 19 as described above. Alden further discloses, wherein the audio information is transmitted from a wireless headset (figure 8, item 28b, 30 and 32).

**Regarding claim 21**, Alden discloses the apparatus of claim 18 as described above. Alden further discloses:

- means for receiving audio information from the half-duplex communications device via the interface (figure 8, items 28a and 76);
- means for transmitting at least a portion of the audio information via the wireless interface (figure 8, items 28b and 78).

**Regarding claim 22**, Alden discloses the apparatus of claim 18. Alden further discloses, wherein the first transmit mode signal is received from a wireless headset (paragraphs 0034-0035). Alden does not disclose the wireless headset in this embodiment. Alden, however, discloses the wireless headset in another embodiment (see figure 8 and its descriptions).

**Regarding claim 23**, Alden discloses the apparatus of claim 18. Alden further discloses, wherein the first transmit mode signal is received from a transmit switch assembly (figure 5, item 58).

**Regarding claim 24**, Alden discloses the apparatus of claim 18. Alden further discloses, wherein the apparatus is integrated with the half-duplex communications device (figure 8, item 16, 28a, and 28b).

**Regarding claim 25**, Alden discloses the apparatus of claim 18. Alden further discloses, wherein the apparatus is separate from the half-duplex communications device (figure 8, item 16, 28a, and 28b).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 26-31, 34-39 are rejected under 35 U.S.C. 103(a) as being obvious over Alden (US 2004/0198436 A1).

**Regarding claim 26**, Alden discloses a system comprising:

- a half-duplex communications device (figure 8, item 16);
- a headset wirelessly connected to the half-duplex communications device (figure 8, items 30, 32, 28b, 28a, and 16);

- wherein the headset is adapted to wirelessly transmit a transmit mode signal for reception by the half-duplex communications device, the transmit mode signal indicating a provision of audio information by the headset for transmission by the half-duplex communications device (figure 8, items 28a, and 28b);

It is obvious that the half-duplex communications device is adapted to transmit at least a portion of the audio information based at least in part upon receipt of the transmit mode signal.

**Regarding claims 27**, Alden discloses the system of claim 26 as described above. Alden further discloses, wherein the headset includes a switch operable by a user and wherein the transmit mode signal is transmitted when the switch is engaged by the user (paragraph 0035, and figure 5, item 58).

**Regarding claim 28**, Alden discloses the system of claim 27 as described above. Alden further discloses, wherein the transmit mode signal includes a signal transmitted during at least a portion of a period that the switch is engaged (paragraphs 0034-0035).

**Regarding claim 29**, Alden discloses the system of claim 27 as described above. Alden is silent on the transmit mode signal includes an absence of a signal during at least a portion of a period that the switch is engaged. However, it is inherent that there is an absence of a signal during at least a portion of a period that the switch is engaged.



**Regarding claim 30**, Alden discloses the system of claim 26 as described above. Alden further discloses, wherein the headset is further adapted to wirelessly transmit the audio information for reception by the half-duplex communications device (paragraphs 0039-0040; figure 8, items 30, 32, 28b, 28a, and 16; figure 5, and its descriptions).

**Regarding claim 31**, Alden discloses the system of claim 30 as described above. Alden further discloses, wherein the half-duplex communications device is adapted to wirelessly transmit audio information by reception by the headset (paragraphs 0039-0040; figure 8, item 13; figure 5, and its descriptions).

**Regarding claim 34**, Alden discloses a system comprising:

- a half-duplex communications device (figure 8, item 16);
- a headset wirelessly connected to the half-duplex communications device (figure 8, items 30, 32, 28b, 28a, and 16);
- wherein the headset is adapted to wirelessly transmit a transmit mode signal for reception by the half-duplex communications device, the transmit mode signal indicating a provision of audio information by the headset for transmission by the half-duplex communications device (figure 8, items 13, 28a, and 28b);

It is obvious that the half-duplex communications device is adapted to transmit at least a portion of the audio information based at least in part upon receipt of the transmit mode signal. In addition, Alden does not disclose a transmit switch assembly wirelessly connected to the half-duplex communications device. However, Alden discloses in the

first embodiments (figure 5) that the headset is wired with a switch (figure 5, item 58).

In the second embodiment, Alden further discloses that the headset is wirelessly connected (figure 8), but is silent on the transmit switch. It is however obvious to one skilled in the art to include a transmit switch wirelessly connect to the communications device because that would less likely cause an entangled with a user.

**Regarding claim 35**, Alden discloses the system of claim 34 as described above. Alden further discloses, wherein the transmit switch assembly includes a switch operable by a user and wherein the transmit mode signal is transmitted when the switch is engaged by the user (paragraphs 0034-0035, and figure 5, item 58).

**Regarding claim 36**, Alden discloses the system of claim 35 as described above. Alden further discloses, wherein the transmit mode signal includes a signal transmitted during at least a portion of a period that the switch is engaged (paragraphs 0034-0035, and figure 5, item 58).

**Regarding claim 37**, Alden discloses the system of claim 35 as described above. Alden is silent on the transmit mode signal includes an absence of a signal during at least a portion of a period that the switch is engaged. However, it is inherent that there is an absence of a signal during at least a portion of a period that the switch is engaged.

**Regarding claim 38**, Alden discloses the system of claim 34 as described above. Alden further discloses, wherein the headset is adapted to wirelessly transmit the audio information for reception by the half-duplex communications device

(paragraphs 0039-0040; figure 8, items 30, 32, 28b, 28a, and 16; figure 5, and its descriptions).

**Regarding claim 39**, Alden discloses the system of claim 38. Alden further discloses, wherein the half-duplex communications device is adapted to wirelessly transmit audio information by reception by the headset (paragraphs 0039-0040; figure 8, items 13, 28a, and 28b; figure 5, and its description).

5. Claims 5-6, 32, and 40, are rejected under 35 U.S.C. 103(a) as being unpatentable over Alden (US 2004/0198436 A1) in view of Chen (US 2002/0057746 A1).

**Regarding claim 5**, Alden discloses the wireless headset of claim 4 as described above. Alden, however, fails to disclose, wherein at least a portion of the audio information from the user is transmitted as packetized digital information.

In similar endeavor, Chen discloses a receiver architecture for receiving an FSK signal. Chen further discloses at least a portion of the audio information from the user is transmitted as packetized digital information (paragraph 0021).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the transmitted information as packetized digital information because in digital format, information is digitized and transmitted in a form of packets.

**Regarding claim 6**, Alden and Chen disclose the wireless headset of claim 5 as described above. Chen further discloses, wherein the means for wirelessly transmitting at least a portion of the audio information from the user includes:

- a processor operably connected to the encoder and adapted to packetize the digital signal (paragraph 0019, and figure 4, item 302);
- a transceiver and antenna operably connected to the processor and adapted to wirelessly transmit the packetized digital signal (paragraph 0019, and figure 4, items 101, and 200).

It is well known in the art to include an encoder adapted to convert an analog signal representative of the audio information to a digital signal.

**Regarding claims 32 and 40**, Alden discloses the system of claims 31 and 39 as described above. Alden, however, fails to disclose, wherein the audio information from the headset and the audio information from the half-duplex communications device is transmitted as packetized digital information.

In similar endeavor, Chen discloses a receiver architecture for receiving an FSK signal. Chen further discloses the audio information from the headset is transmitted as packetized digital information (paragraph 0021, and figure 4, items 401 and 406). Therefore, it is obvious that the audio information from the half-duplex communications device is transmitted as packetized digital information

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the transmitted information as packetized digital

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information because in digital format, information is digitized and transmitted in a form of packets.

6. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alden (US 2004/0198436 A1) in view of Bae (US – 6,795,718 B2).

**Regarding claim 8**, Alden discloses the wireless headset of claim 1 as described above. Alden, however, fails to disclose, wherein the wireless headset is an earclip-type headset.

Bae discloses, wherein the wireless headset is an earclip-type headset (column 1, lines 55-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to disclose the wireless headset is an earclip-type headset because of the variety.

**Regarding claim 9**, Bae discloses the wireless headset of claim 8 as described above. Bae further discloses, wherein the wireless headset further includes an ear insert for insertion into a user's ear canal (column 4, lines 26-46).

**Regarding claim 10**, Bae discloses the wireless headset of claim 9 as described above. Bae further discloses, wherein the ear insert comprises a comfortable material (column 4, lines 26-46).

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7. Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alden (US 2004/0198436 A1) in view of Bae (US – 6,795,718 B2) in further view of Lenz (US – 5,101,504 A).

**Regarding claim 11**, Alden and Bae disclose the wireless headset of claim 9 as described above. Alden and Bae, however, fail to disclose, wherein the switch is positioned substantially coaxially with the ear insert.

Lenz, however, discloses the switch is positioned substantially coaxially with the ear insert (figure 1, item 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the switch is positioned substantially coaxially with the ear insert because it would not create a torque, and make user feel uncomfortable when wearing this wireless headset.

8. Claims 12-13, 33, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alden (US 2004/0198436 A1) in view of Lenz (US – 5,101,504 A).

**Regarding claim 12**, Alden discloses the wireless headset of claim 1 as described above. Alden, however, fails to disclose, wherein the wireless headset is a headband-type headset.

Lenz discloses, wherein the wireless headset is a headband-type headset (column 2, lines 15-20, figure 1, item 16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to disclose the wireless headset is a headband-type headset because of the variety.

**Regarding claim 13**, Alden discloses the wireless headset of claim 1 as described above. Alden further discloses a wireless headset (figure 8). Alden, however, fails to disclose, wherein the switch is positioned on a body of the headset.

Lenz discloses wherein the switch is positioned on a body of the headset (column 2, lines 26-43, figure 1, item 24).

**Regarding claims 33 and 41**, Alden discloses the system of claims 26 and 34 as described above. Alden, however, fails to disclose, wherein the half-duplex communications device is selected from one of a group comprising: a two-way radio and a cellular phone.

Lenz discloses, wherein the half-duplex communications device is selected from one of a group comprising: a two-way radio and a cellular phone (column 2, lines 20-30, and figure 1, item 23).

It is, however, well known in the art at the time of the invention to include the half-duplex communications device is selected from one of a group comprising: a two-way radio and a cellular phone.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Cai whose telephone number is (703) 305-0265.

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The examiner can normally be reached on Monday-Friday; 9:00-6:00; alternating Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wayne Cai  
Examiner  
Art Unit 2681

  
ERIKA A. GARY  
PRIMARY EXAMINER